

PO No	Supplier	Line Item No	Rel No	Terms	Purchased Item	Description	For Part No	Project	Equipment ID	Order Qty	Due Date	Received Quantity	Accounting Job No	Serial No	Status	Receive Date	Price/Unit	Aging Days	Past Due	Total	Supplier Name
PO038332	TWM001-VU	1	1	Net 30	M4130NT0.750W.049	4130 Round Tube .750 X.049W : MATERIAL: AISI 4130N STEEL TUBING AS PER MIL-T-6736 OR AMS 6371/6360/6361/6362 6373/6374 receive ft				100	11/20/2017	96		S010523	Stock	11/16/2017	\$ 6.00 / ft	0	\$574.01	TW Metals	
										Total:	100	96								\$574.01	

Plex 11/16/2017 9:23 AM Dart.Plouffe.Sonia

Status: Receiving

Part: **M4130NT0.750W.**

Created: 11/16/17 9:22 AM DART.PLOUFFE.S



Serial No: **S010523**



Dart Hawkesbury
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

PURCHASE ORDER
PO038332

Supplier: TWM001-VU TW Metals PO Box 933014 Atlanta, GA 31193-3014 USA Phone: 585 768 5600 Fax: 585 768 5601	PO No: PO038332 PO Date: 11/10/17 Due Date: 11/20/17 Purchase Order Revision: Revision Date: Ship-To Contact: Phone: Ship To: 1270 Aberdeen Street Hawkesbury ON K6A 1K7 Canada Phone: 613-632-5200
	Via: Ground Pymt Terms: Net 30 Freight Terms: Special Comments:

E-MAILED
NOV 10 2017

Items											
Line Item	Part	Rev	Description	Item Tax	Status	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (USD)	Extended Price
1	M4130NT0.750W.049	-	4130 Round Tube .750 X.049W : MATERIAL: AISI 4130N STEEL TUBING AS PER MIL-T-6736 OR AMS 6371/6360/6361/6362 6373/6374 receive ft		Firmed	11/20/17	100 ft	0 ft	100 ft	\$6.00/ft	\$600.00
2	M304P0.675W.091	-	304/316 Pipe .675 OD x .091 Wall Thickness : MATERIAL: TP304/TP316 STAINLESS STEEL SEAMLESS PIPE AS PER ASTM A312/ASME SA312 receive ft		Firmed	11/20/17	20 ft	0 ft	20 ft	\$5.00/ft	\$100.00

Grand Total: \$700.00

Order Notes

CZ
Terms & Condition of Purchasing(Suppliers) and Procurement Quality Clauses are an integral part of our AS9100 requirements. To learn in detail, please visit www.dartaerospace.com for further explanation.

Plex 11/10/17 1:56 PM dart.lavoie.chantal



O'Neal High-Performance Metals Group

Packing
Slip

ORDER NO.: 60643887 FROM: CRAN PAGE 1

CUST NUMBER: 1203820 NET WGT: 35.083 REQ. DATE: 11/17/17 CONFIRMED
 SOLD TO:
 DART AEROSPACE LTD
 1270 ABERDEEN ST
 HAWKESBURY ON
 CANADA CN K6A 1K7 CN K6A 1K7

SALESPERSON: DONNA SMALLEY SHIP BY: 11/13/17
 TERMS: NET 30 DAYS VIA: COMMON CARRIER
 F.O.B.: SHIPPING POINT FREIGHT: PREPAID
 CUST ORD NO.: PO038332 RELEASE NO.:
 RECEIVING PHONE:

LINE	ITEM DESCRIPTION	WIDTH	LENGTH
0001	33047 CDS 4130 6736	3/4 X .049	17/24 FT

CLN#	ORD QTY	INVOICE QTY	SHIPPED QTY	WT	PCS
	100.000 FT	95.668 FT	95.668 FT	35.083	

** 1 TEST REPORTS REQUIRED **

** 1 CERTS REQUIRED **

ECCN: 9A991.d Export License: NLR Expiration Date: 0/00/00
 PO:49368990 HT:602196 PC: 4 CUSTOMER QTY: UOM
 MLT:GERMANY MFG:GERMANY SLB/CL:1637185

BROKERS KUEHNE AND NAGEL LTD

SP 11-16

PACK INFO					
AREA	TYPE OF PKG	PKGS	GRS	WEIGHT	WIDTH
NEW PEN CARTON	Orders In Package - 1	1.000	60.083	3.0000	293.0000
Box No - TWPK17008758					
1.000 60.083					

BY: Tom Weaver
RT 000-

UNLOAD TYPE: NONE SPECIFIED

DATE SHIPPED _____

1

DATE FILLED _____

THANK YOU FOR THIS ORDER

TERMS AND CONDITIONS APPLICABLE TO THE SALE OF THESE
 PRODUCTS ARE SET FORTH ON OUR WEBSITE FOR YOUR CAREFUL
 REVIEW.
<http://www.twmetals.com/invoice-terms.html>



O'Neal High-Performance Metals Group



Packing Slip

ORDER NO.: 60643887 FROM: CRAN PAGE 2

CUST NUMBER: 1203820	NET WGT:	35.083	REQ.DATE: 11/17/17 CONFIRMED
SOLD TO:		SHIP TO:	
DART AEROSPACE LTD		DART AEROSPACE LTD	
1270 ABERDEEN ST		1270 ABERDEEN ST	
HAWKESBURY ON		HAWKESBURY ON	
CANADA	CN K6A 1K7	ONTARIO CANADA	CN K6A 1K7

SALESPERSON: DONNA SMALLEY SHIP BY: 11/13/17
TERMS: NET 30 DAYS 27 ENGLEHARD DRIVE
F.O.B.: SHIPPING POINT MONROE TWP NJ 08831
CUST ORD NO.: PO038332
VIA: COMMON CARRIER
FREIGHT: PREPAID
RELEASE NO.:
RECEIVING PHONE:

"TW Metals MSDS data is available on our web site at www.twmetals.com. MSDS data can be found under the Technical Resources Tab, Product Statistics & Data and the TW Metals MSDS's heading. If you do not have web site access you may telephone 610-458-1300 and we will mail or fax a copy of our current MSDS data to your location."

"CERTIFICATE OF CONFORMANCE"

"TW Metals certifies that the material supplied on this purchase order and contained in the heat/lot number referenced above has been manufactured, inspected, and tested in accordance with the material specification. These records are on file at TW Metals. Packaging material for shipments to Europe and China consists of manufactured wood products and complies with the European emergency measures for coniferous non-manufactured wood packing material."

Authorized Test Report Clerk *[Signature]* Date: 11/10/12

These commodities have been exported from the United States in accordance with the U.S. export control laws, export administrations regulations. Diversion contrary to U.S. law prohibited.

THANK YOU FOR THIS ORDER

TERMS AND CONDITIONS APPLICABLE TO THE SALE OF THESE PRODUCTS ARE SET FORTH ON OUR WEBSITE FOR YOUR CAREFUL REVIEW.
<http://www.twmetals.com/invoice-terms.html>

Benteler Steel/Tube GmbH
Postfach 13 40
33043 Paderborn
Deutschland
Tel.: +49.5254.81-0 Fax: +49.5254.13886

BENTELER

Steel/Tube

ABNAHMEPRÜFZEUGNIS EN 10204-3.1
INSPECTION CERTIFICATE EN 10204-3.1
CERTIFICAT DE RECEPTION EN 10204-3.1
EN 10204:2005-01
Benteler Steel/Tube GmbH - Postfach 1340 - 33043 Paderborn - Deutschland
TW Metals:
The Aboretum, Suite 204
760 Constitution Drive.
EXTON PA 19341
USA

Dokument-Nr.:

41-1013940/001/Z

Prüf-Nr.:

41-1013940/001/Z

Inspection No.:

No. du document:

Document No.:

No. du certificat:

No. du certificat:

Hersteller:

Manufacturier:

Producteur:

Producent:

Manufacturier's brand:

Marque du producteur:

Markenname des Herstellers:

Stamp of the manufacturer representative:

Emblème du représentant:

Emblème du contrôleur:

Stahlschmelzverfahren:

Staalmaking process:

Procédé d'aboration de l'acier:

Four électrique

Kunden-Bestell-Nr.:

Purchaser Order No.:

No. de commande du client:

No. de comande Benteler:

Verzendanzeiger-Nr.:

Dispathch Note No.:

No. d'avis d'expédition:

Produkt: NAHTLOSE STAHLRÖHRE

Product: SEAMLESS STEEL TUBES

Produit: TUBES D'ACIER SANS Soudure

Benteler Auftrags-Nr.:

Benteler Order No.:

No. de commande Benteler:

Stamp of the inspection representative:

Emblème du représentant:

Emblème du contrôleur:

Produkt-Nr.:

Benteler Stahl/Tuba GmbH
Postfach 13 40
38043 Paderborn
Deutschland
Tel.: +49 5254-81-0 Fax: +49 5254-13666

BENTELER ▶

Steel/Tube

ABNAHMEPRÜFZEUGNIS EN 10204-3.1

INSPECTION CERTIFICATE EN 10204-3.1
CERTIFICAT DE RECEPTION EN 10204-3.1

Dokument-Nr.:

Document-Nr.:

No. du document:

41-1013940/001/Z

Test pressure

Prüfdruck

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Pos.	Stück	Maße	Gesamt Länge	Gewicht	Schmelzen-Nr.	Prüfdruck	Rohr-Nr.-Gruppe	Vielfachlängen
Item.	Number	Dimensions	Length total	Weight	Heat N°.	Test pressure	Tube number group	Multiple lengths
Poste	Nombr.	Dimensions	Longueur totale	Poids	No. de coulée.	Préssion d'épreuve	Série de n° des tubes	Longueurs multiples
		feet	feet	lbs				
0008	120	0,750" O.D. * 0,049" WT 20 FT - 24 FT	2874,02	1049	602196			
0008	120	0,750" O.D. * 0,049" WT 20 FT - 24 FT	2877,95	1054	603839			

Schmelzenanalyse [%] / Heat analysis [%] / Analyse sur coulée[%]

Pos.	Schmelzen-Nr.	C	Si	Mn	P	S	CR	Mo	Ni	CU
Item.	Heat No.									
Poste	No. de coulée.									
0008	602196	0,220	0,260	0,55	0,006	0,001	0,89	0,18	0,09	0,12
0008	603839	0,320	0,270	0,54	0,008	0,003	0,88	0,17	0,10	0,12

Produktanalyse [%] / Product analysis [%] / Analyse sur produit [%]

Pos.	Schmelzen-Nr.	C	Si	Mn	P	S	CR	Mo	Ni	CU
Item.	Heat No.									
Poste	No. de coulée.									
0008	602196	0,310	0,280	0,56	0,009	0,001	0,89	0,19	0,09	0,17
0008	603839	0,320	0,270	0,54	0,009	0,003	0,88	0,17	0,09	0,11

Prüfergebnisse / Test results / Résultats des essais

Die Rohre wurden zerstörungsfrei geprüft:

The tubes are non destructive tested:

Les tubes ont passé un essai non destructif:

ET-test: acc. to ASTM-A 450; ET - Test method: acc. to ASTM-E 309; for imperfections] PASSED

ET-test: ET with rotating pancake coils; according to EN 10246-3; Imperfections;

Notch depth: 0,30 mm; notch width < = notch length min. 2 x transducer width (max. 50 mm)

Materialverweichungsprüfung: PASSED

Material conformity test: PASSED

Verifikation de la rugosité: PASSED

Augensichtskontrolle: PASSED

Visual inspection: PASSED

Examen visuel: PASSED



Benteler Stahl/Tube GmbH
Postfach 13 40
33043 Paderborn
Deutschland
Tel.: +49-5254-81-0 Fax: +49-5254-13866

BENTELER ▼

Steel/Tube

ABNAHMEPRÜFZEUGNIS EN 10204-3.1
INSPECTION CERTIFICATE EN 10204-3.1
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Ergebnisse der mechanischen Prüfung / Results of mechanical testing / Résultats des essais mécaniques

Die Probennahme erfolgte an Vielfachläugen.

The sampling was carried out on multiple locations,

L'échantillonage était réalisé sur plusieurs multiples.

Zugversuch längs bei RT. Vollprüfe / Tensile test longitudinal at RT. Full section test specimen / Essai de traction longitudinale à TA. Epreuve à section complète

Pos. Requirement Exigences	Proben-Nr. Specimen No. No. de l'épreuve	Schmelzen-Nr.- Heat No. No. de coulée	Probenabmessung Specimen dimensions Dimensions de l'épreuve	Streckgrenze Yield strength Limit d'élasticité	Zugfestigkeit Tensile strength Résistance à la traction		Dehnung Elongation Allongement	A2° Rm. ksi MIN 95	A2° % MIN 12,00	1. Formel 1. Formule 1. Formule
					mm	mm				
0008	0000001	602196	19,05 X 1,25	116	330	18,00				
0008	0000002	602196	19,05 X 1,25	118	331	18,00				
0008	0000003	602196	19,05 X 1,25	116	330	16,00				
0008	0000001	603839	19,05 X 1,25	116	330	18,00				
0008	0000002	603839	19,05 X 1,25	118	331	18,00				
0008	0000003	603839	19,05 X 1,25	116	330	16,00				

Randentkohlung / Surface decarburization / Déscarburation superficielle

Pos. / Item / Poste: 0008

acc. to AMS-6360, partial decarburization outside max. 0,009 in., partial decarburization inside max. 0,009 in., partial decarburization outside and inside max. 0,012 in., partial decarburization outside and inside max. 0,305 mm, without total decarburization; partial decarb. out. max.: 0,229 mm; partial decarb. ins. max.: 0,229 mm

Vermerk / Remark / Remarque

Pos. / Item / Poste: 0008

Certificate remarks: The steel grade corresponds to MIL-T-6736B, AMS 6380M, material free from mercury contamination, FAR BAA: 52-225-1-CANNET COMPLY, DFARS BAA: 252-225-7001 CAN COMPLY, No weld, repair has been carried out, Country of origin of the material and heat: Germany, Aircraft quality steel acc. to AMS 2301K, see appendix, page 1 of 1

Pos. / Item / Poste: 0008

Macroscopic examination: acc. to ASTM-E 381

Pos. / Item / Poste: 0008

Magnetic particle inspection: acc. to AMS 2301K/ASTM-E 1444, on prematerial



AS

Benteler Steel/Tube-GmbH
Postfach 13 40
33043 Paderborn
Deutschland
Tel.: +49 5254 81-0 Fax: +49 5254 13866

BENTELER ▶

Steel/Tube

ABNAHMEPRÜFZEUGNIS EN 10204-3.1 Dokument-Nr.: 41-1013940/001/Z
INSPECTION CERTIFICATE EN 10204-3.1 Document No.: Inspection No.:
CERTIFICAT DE RECEPTION EN 10204-3.1 No. du document No. du certificat:
Pos. / Item / Poste: 0008
Grain size: acc. to ASTM-E 112; Grain size: finer; 5; Grain size: Longitudinal structure: micrography, on prematerial

Verkäufer(in) / Sales Personnel /Personne chargée : Mr Schwarz, Tel.: 05254 81-204311, Fax: 204391

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No. du certificat:
Page:



Paderborn Schloss Neuhaus, 30.06.2017, TEL.: 05254.81-201767 FAX: 05254.81-201752

Abnahmbeauftragter

Inspection representative

Consignor

i. A. THOMAS GOLLAN / TEM
We certify that the supplied products comply with the order specification. This document was prepared by means of electronic data processing and is valid without signature.
Nous attestons que les produits livrés sont conformes aux stipulations de la commande. Ce document a été établi par traitement électronique de l'information et est valide sans signature.

Benteler SteelTube GmbH
Residenzstraße 1
33104 Paderborn
Germany
Tel.: 05254.81-0 Fax: 05254.13666

BENTELER ▼ Steel/Tube

Abnahmeprüfzeugnis EN 10204-3.1 / Anhang
Inspection Certificate EN 10204-3.1 / appendix.
Certificat de réception EN 10204-3.1 / appendice.

Dokument-Nr.
Document No.:
No. de document:

41-1013940/001/Z

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von
of 1

de

Halbzeuguntersuchung: Stahlsorte: 4130 / Semi finished product examination: grade 4130 / Produit semi-finé: nuance 4130

Schmelzen-Nr. Heat No. Coulée No.	Position Item Poste	Korngröße Grain size Grossesse de grain (ASTM-E 112)	Härtbarkeit (min. Anforderungen) Hardenability (min. requirements) Trémabilité (exigences min.) (ASTM-A 255)	Magnetpulverprüfung Magnetic particle inspection Essai à la poussière magnétique (AMS 2301 K/ASTM-F 1444)	Macroätzprüfung Macrostructure test Essai de macrostructure (ASTM-A-E-381)			
min. 5.		J(5x/16") min. 35 HRC	J(8/16") min. 28 HRC	F max. 0,34	S max. 0,25	max. S.2.	max. R.1	max. C.2
602198	008	9	44	34	0,020	0,015	S 2	R 1
Decarburization Depth		Outside 0,000 mm	Inside 0,000 mm					C 2
603689	008	9	38	31	0,020	0,020	S 2	R 1
Decarburization Depth		Outside 0,000 mm	Inside 0,000 mm					C 2

Der Stahl ist frei von Quecksilberverunreinigungen. / The steel is free of mercury contamination. / L'acier est libre des contaminations de mercure.

Paderborn Schloß Neuhaus, 30.06.2017
Tel.: (0)5254.81-201760 Fax: (0)5254.81-201752

Abnahmbeauftragter
Inspection représentative
Contrôleur

Thomas Göläjn

